CONTRACTOR ASSURANCE
AT OFFICE OF SCIENCE LABORATORIES

CONTRACTOR ASSURANCE SYSTEM PEER REVIEW GUIDE
AND LINES OF INQUIRY
Rev.1

April 15, 2010

INTRODUCTION

Purpose

This Peer Review Guide was developed for the Department of Energy Office of Science (DOE-SC) and its National Laboratories to: (1) provide guidance for the conduct of reviews of DOE-SC Laboratories' contractor assurance systems (C AS) and, (2) aid laboratory management, corporate parents, and DOE site offices with their preparation for, or participation in, these reviews.

Background

DOE-SC has added an H clause to each contract for the management and operation of its National Laboratories. This contract clause requires that a contractor assurance system be implemented at each of its laboratories and also defines the attributes the contractor assurance systems must exhibit.

One attribute required by the H Clause is that each contractor should have a method for verifying/ensuring the effectiveness of its assurance system processes. Third party audits, peer reviews, independent assessments, and external certification may be used. However, DOE-SC has decided to use a peer review process (which this guide describes) for the initial review of these systems at each of its sites to provide itself assurance that this H Clause is being effectively implemented, and to identify and share best practices and lessons learned to enable continuous improvement. This guide supports the execution of peer reviews in a manner that produces consistent, objective feedback that can be used to mature and build upon existing Contractor Assurance Systems.

PEER REVIEW

Philosophy

Assurance systems are designed to ensure mission objectives are met; workers, the public, and the environment are protected; and operational, facility, and business systems are effectively run and contract requirements are met. Contractor assurance systems are *not* required to be identical in terms of processes, tools and methods across the DOE-SC labs. Rather, the expectation is that the DOE-SC assurance approach, as defined in the H clause, is implemented and produces the desired outcomes. The peer reviews are designed to provide feedback on the status of implementation of the H clause, and facilitate continuous improvement across the DOE-SC laboratories.

The DOE-SC assurance approach relies on a close partnership between laboratory management, contractor corporate parents, and the local site office as all three entities being reviewed function as a unit to accomplish the mission and deliver outcomes. For this reason, the composition of the peer review teams will reflect these entities and require participation from each. The overall peer review process is overseen by a Steering Committee whose composition also reflects the three key assurance roles/participants. The Steering Committee is accountable to the DOE-SC Deputy for Field Operations (DDFO).

Objectives

The peer review will determine: 1) the extent to which contractor assurance systems, as defined in the H clause, are in place at each DOE-SC laboratory; and 2) the effectiveness and maturity of these systems in terms of functionality, effectiveness and efficiency.

The peer review team's conclusions will be based on the assessment of the assurance systems, processes, tools and practices in place, the level of engagement of all three reviewed parties (laboratory, corporate parent, and site office) in these processes, and the evidence presented of process effectiveness. The "Lines of Inquiry" contained in Appendix B of this Guide will be used to frame the review. In addition, the peer review process will provide a means of sharing good/best practices and/or lessons learned fostering continuous improvement of assurance systems across the DOE-SC laboratories, corporate parents, and site offices. The review is not focused on process only, and is conducted to evaluate how the CAS contributes to mission accomplishment and outcomes.

Key Roles

DOE- SC Deputy Director for Field Operations (DDFO):

- Set expectations for the Contractor Assurance System Peer Review process
- Approve the members of the Contractor Assurance System Peer Review Steering Committee
- Approve the Peer Review schedule established by the Steering Committee
- Participate as a member of the Steering Committee

Contractor Assurance System Steering Committee:

- Establish the peer review schedule
- Oversee the peer review process
- Approve the Peer Review Guide and Lines of Inquiry and any subsequent changes to them
- Establish a roster of potential peer review team members
- Approve the membership of each peer review team as proposed by the Laboratory COOs
- Appoint a Peer Review Team Coordinator for each peer review team

Laboratory Chief Operating Officer (COO):

- Serve as the primary contact for the peer review of their site's contractor assurance system
- Provide all advance materials and input to their site's review
- Provide any necessary space, site access, access to key personnel or other items or materials as needed by the peer review team
- Recommend peer review team members (consistent with team composition requirements noted below) for the approval of the Steering Committee
- Be available to serve as a member on a peer review team
- Discuss their CAS during their peer review

Corporate Parents:

- Be available to serve as the chair of one or more peer review teams
- Provide any necessary documents, physical access, access to key personnel or other items or materials as needed by the peer review team
- Discuss their CAS during their peer review

DOE-SC Site Office Managers:

- Serve as a member of the peer review steering committee if nominated by DOE-SC DDFO
- Be available to serve as a member on a peer review team
- Provide any necessary documents, physical access, access to key personnel or other items or materials as needed by the peer review team
- Discuss the Site Office roles and Oversight Plan during their peer review

Peer Review Team Coordinator:

- Participate as an Assurance SME
- Serve as coordinator of the peer review and review team
- Facilitate the conduct of the peer review
- Assure the delivery of outcomes/products from the review

Peer Review Team Members:

- Participate on Peer Review Teams consistent with this guide and LOIs contained in Appendix B
- Conduct peer review exit briefings
- Hear feedback from Peer Review observers
- Work with the Peer review Team Coordinator to produce all deliverables on time

Peer Review Observers:

- Are not active participants in the review
- Provide feedback on the peer review session to the Peer Review Team after each review
- Participate in developing lessons learned from each review
- Each DOE-SC site may send one representative to each peer review. This representative may be from the site's lab, corporate parent or site office. Approval for more than one representative from each site must be obtained from either the COO, Site Office Manager, or corporate parent of the site being reviewed

Review Inputs and Materials

The review will include formal presentations by and interviews with appropriate individuals from the affected laboratory, corporate parent and site office. The review will also assess evidence of process functionality and effectiveness. Each laboratory, corporate parent and DOE site office will provide the peer review team the names of appropriate individuals to be interviewed and upload review materials for the team's advance preparation on the contractor assurance peer review SharePoint site. It is expected that the following individuals would participate in the review and interviews:

- Laboratory Director, the Lab's Assurance Officer/Director (or senior managers leading the assurance functions) and the laboratory's COO
- Senior laboratory staff leading laboratory performance management functions
- Corporate parent's assurance officer and leaders of key assurance functions
- Site Office Manager and key site office staff who participate in or are responsible for oversight of Laboratory assurance functions

The peer review team coordinator will work with the COO of the laboratory being reviewed to establish the final agenda and schedule of the review.

The types of documents needed by the peer review team at least one week prior to the review include:

- A description of the Contactor Assurance Process (including the roles/functions of laboratory management and the corporate parent) – laboratory and corporate parent
- The site office oversight plan – site office
- Evidence of process execution and functionality such as records of decisions, action plans, risk identification and mitigation plans, etc. – all parties
- Specific assurance deliverables – laboratory and corporate parent

- Written responses to the review LOIs – all parties

These materials familiarize the review team with the existing assurance system and prepare them for the review. They further provide evidence of assurance system effectiveness.

Deliverables/Records

The review team will conduct an exit briefing for the site COO, Site Office Manager, and corporate parent representatives (and their invitees) on the results of the peer review at the conclusion of the review. The draft peer review report will be delivered to these three parties, for factual accuracy review, within two weeks of the review, with the final report delivered two weeks after all comments are received on the draft.

The single deliverable and record from each peer review will be the final report of the peer review team. This report will be archived on the contractor assurance system peer review SharePoint site. An ongoing set of best practices and lessons learned will also be produced and made available via the SharePoint site.

Unless subject to a sensitive situation, the documentation presented during the review will be made available to the review team to retain as necessary for completion of the final report and/or best practices and lessons learned.

Post Review/Actions

The reviewed laboratory's COO, corporate parent, and site office will determine what actions will be taken, if any, in response to the Peer Review team's recommendations. The peer review team coordinator will post best practices and/or lessons learned, and a summary of any site-specific responses to issues or recommendations made by the review team on the CAS SharePoint site.

STEERING COMMITTEE and PEER REVIEW TEAM COMPOSITION

Steering Committee Composition

The Steering Committee will have fourteen members; the DOE-SC DDFO, one person from each contractor (either from lab management or the corporate parent) and three DOE Site Office Managers. The Steering Committee shall elect a chair who will lead meetings and discussions of the committee, and assure that its functions as described above are properly carried out. The chair will serve a one year term.

Peer Review Team Composition

The Steering Committee will establish a roster of potential peer review team members from the DOE – SC labs, site offices, and corporate parents.

Each peer review team will be composed of six individuals. The membership of each peer review team will be selected from the roster of potential members supplied by the Steering Committee and proposed by the reviewed lab's COO consistent with the following conventions, and approved by the Steering Committee. The peer review team must:

- Include all three of the following "principals" from different labs or sites:
  - A laboratory COO
  - A DOE Site Office Manager
  - A corporate parent representative (who will chair the review; note that in some cases, one of the other principals may be asked to chair the review)
- Include three Assurance Subject Matter Experts (SME):
  - An Assurance SME who will also serve as coordinator of the reviews conducted during each fiscal year
  - Two additional Assurance SMEs

Schedule for Peer Review

The Steering Committee will establish specific dates for the reviews following the anticipated schedule depicted in the following table. It is anticipated that the actual onsite time will normally be two days for each review to cover all aspects of the assurance function (i.e., laboratory management, contractor corporate parent, and the site office). It is essential that all needed documents and other inputs are available before the review begins to facilitate an effective review.

Laboratory	FY10	FY11-FY12
Ames		TBD
Argonne		TBD
Brookhaven		TBD
Fermi Accelerator		TBD
Thomas Jefferson Accelerator		TBD
Lawrence Berkeley	September 30, 2010	
Oak Ridge	May 5-6, 2010	
Pacific Northwest	July 30, 2010	
Princeton Plasma Physics		TBD
Stanford Linear Accelerator		TBD

Appendix A
DOE-SC Laboratories, Contractors, and Site Offices

- Ames Laboratory
  - Operated by Iowa State University
  - Ames Site Office; Cynthia Baebler, Manager
- Argonne National Laboratory
  - Operated by UChicago Argonne, LLC (*University of Chicago (sole member of LLC) with Jacobs Group, Inc.)*
  - Argonne Site Office; Joanna Livengood, Acting Manager
- Brookhaven National Laboratory
  - Operated by Brookhaven Science Associates, LLC (*Stony Brook University & Battelle)*
  - Brookhaven Site Office; Mike Holland, Manager
- Fermi National Accelerator Laboratory
  - Operated by Fermi Research Alliance, LLC (*Universities Research Association (URA) & University of Chicago; URA - a consortium of 87 leading research oriented universities primarily in the United States, with members also in Canada, Japan, and Italy)*
  - Fermi Site Office; Mark Bollinger, Acting Manager
- Thomas Jefferson National Accelerator Facility
  - Operated by Jefferson Science Associates, LLC (*Southeastern Universities Research Association (SURA) & the Computer Sciences Corp; SURA/CSC company created specifically to manage and operate the Thomas Jefferson National Accelerator Facility*
  - Thomas Jefferson Site Office; James Turi, Manager
- Lawrence Berkeley National Laboratory
  - Operated by University of California
  - Berkeley Site Office; Aundra Richards, Manager
- Oak Ridge National Laboratory
  - Operated by UT-Battelle, LLC (*University of Tennessee & Battelle)*
  - ORNL Site Office; Johnny Moore, Manager
- Pacific Northwest National Laboratory
  - Operated by Battelle
  - Pacific Northwest Site Office; Mike Weis, Manager
- Princeton Plasma Physics Laboratory
  - Operated by Princeton University
  - Princeton Site Office; Jerry Faul, Manager
- SLAC National Accelerator Laboratory
  - Operated by Stanford University
  - SLAC Site Office; Paul Golan, Manager

Appendix B: Lines of Inquiry
April 15, 2010

Part One: Laboratory Management

CAS Attribute and/or Expected Outcome	General Question	Detailed Questions
A. A comprehensive description of the CAS with processes, key activities, and accountabilities are clearly identified.	A.1 Is there a written description of the CAS?	A.1.1 What CAS processes, procedures, tools, and systems are in place?
		A.1.2 Are roles, responsibilities and accountabilities clearly identified?
		A.1.3 Are resources for the CAS processes allocated using a risk-based approach (i.e., allocated to highest risk activities, functions, processes first)?
	A.2 Does the CAS description encompass applicable processes and key activities?	A.2.1 What areas need to be added, enhanced, or removed?
B. Methods for verifying/ ensuring CAS processes.	B.1 Does the CAS include a method for verification	B.1.1 Is there a method, approach or plan to verify the CAS?
C. Timely notification to the Site Office of significant assurance system changes prior to the changes.	C.1 How does the method for notifying the Site Office of significant assurance system changes allow for timely input by the Site Office	C.1.1 Does the laboratory process require notification of the Site Office prior to making significant assurance system changes?
D. Rigorous risk-based, credible self-assessments, and feedback and improvement activities, including utilization of	D.1. How is assurance data used by management to improve performance and enable strategy execution?	D.1.1 What types of self-assessments are performed?
		D.1.2 What are laboratory mechanisms for ensuring improvements are realized from assessment results?

CAS Attribute and/or Expected Outcome	General Question	Detailed Questions
nationally recognized experts, and other independent reviews to assess and improve the Contractor's work process and to carry out independent risk and vulnerability studies.		D.1.3 Are these systems, processes and tools working effectively and as intended?
		D.1.4 How are risks, including emerging risks, that could prevent strategic, operating, and management objectives from being met, identified and managed?
		D.1.5 What mechanisms allow for ongoing, integrated monitoring of laboratory performance?
		D.1.6 Is there proper engagement of the people in key Assurance roles?
E. Identification and correction of negative performance/compliance trends before they become significant issues.	E.1 Have assurance processes/functions enabled the lab to become preventive relative to addressing performance trends?	E.1.1 How is information from assurance activities used, monitored and evaluated?
		E.1.2 How is guidance or suggestions from Governance dispositioned?
		E.1.3 How are performance concerns and trends identified?
F. Integration of the assurance system with other management systems including Integrated Safety Management.	F.1 Is the CAS integrated into the management systems of the lab?	F.1.1 How is the CAS integrated into or leverage other management systems functions or key programs (ISM, QA, etc.)?
G. Metrics and targets to assess performance, including benchmarking of key functional areas with other DOE contractors, industry and research institutions that result in efficient and cost effective performance.	G.1 Are performance metrics and targets being used effectively?	G.1.1 What key performance measures are used to allow the contractor to monitor vital operations, analyze data, and identify adverse conditions and trends?
		G.1.2 How is benchmarking of key functional areas used?
H. Continuous feedback and performance improvement.	H.1 Are feedback mechanisms improving performance?	H.1.1 What is the process for managing issues and correcting and/or preventing issues, and/or improving performance?

CAS Attribute and/or Expected Outcome	General Question	Detailed Questions
		H.1.2 How is feedback integrated to improve the CAS?
		H.1.3 How is the effectiveness of completed corrective actions determined and evaluated?
I. An implementation plan (if needed) that considers and mitigates risks for the CAS.	I.1 Was a CAS implementation plan required?	I.1.1 If yes, is implementation considered complete and effective?
J. Timely and appropriate communication to the Site Office, including electronic access, of assurance related information.	J.1 Does the Site Office have necessary and sufficient access to CAS documents and information to allow adequate monitoring and assessment of the CAS?	J.1.1 What are the communication pathways to the Site Office?
		J.1.2 How are Site Office oversight activities integrated into the CAS?
		J.1.3 Are assurance processes "transparent" in that the Site Office has ready access to assurance information?
K. Lab Management's view of benefits derived from Assurance functions	K.1 What benefits have you derived from your CAS and overall Assurance System to date and how has it enhanced the accomplishment of mission outcomes?	
	K.2 What could create even more benefit?	
	K.3 Is the system helping the Laboratory in: a) meeting mission objectives, b) protecting workers, the public, and the environment, c) effective operation of facility and business systems and d) meeting contract requirements?	
	K.4 What lessons learned would you like to share with your fellow labs?	

Part Two: Contractor Corporate Parents

CAS Attribute and/or Expected Outcome	General Question	Detailed Questions
L. The Governance role is present and executed within the Assurance system.	L.1 How is the Governance function structured?	L.1.1 Who provides governance?
		L.1.2 How is the Governance function organized or implemented?
	L.2 How is the Governance function executed?	L.2.1 How does Governance function as it relates to the CAS?
		L.2.2 What are the "mechanisms" that assure CAS performance objectives are being met?
		L.2.3 How does Governance become informed of areas of concern?
		L.2.4 How does Governance follow-up on areas of concern that warrant attention, and provide feedback and/or course corrections to Lab Management?
		L.2.5 How has governance identified areas of focus, raised concerns to Lab management, or requested an assessment or analysis?
		L.2.6 Is the current governance of laboratory performance appropriate/adequate for the identified mission, operations, and risks of the Lab?
		L.2.7 How does governance hold laboratory management accountable for Laboratory performance?
M Timely and appropriate communication to the Site Office, including	M.1 Does the Site Office have necessary and sufficient access to CAS documents	M.1.1 What are the communication pathways to the Site Office?

CAS Attribute and/or Expected Outcome	General Question	Detailed Questions
electronic access, of assurance related information.	and information to allow adequate monitoring and assessment of the CAS?	M.1.2 How are Site Office oversight activities integrated into the CAS?
		M.1.3 Are assurance processes "transparent" in that the Site Office has ready access to assurance information?
N. Valued delivered by, and improvement of the Governance function and overall Assurance System.	N.1 What benefits have been derived from the CAS?	
	N.2 How could the Governance function of the CAS be improved?	
	N.3 Are there any lessons Learned that you'd like to share with your fellow contractors?	

Part Three: DOE Site Offices

CAS Attribute and/or Expected Outcome	General Question	Detailed Questions
O. Timely and appropriate communication to the contractor regarding performance expectations and accountability.	O.1 Are the Site Office communication mechanisms regarding contractor performance adequate?	O.1.1. Has the Contracting Officer communicated approval of the initial contractor assurance system description to the contractor?
		O.1.2 What are the communication pathways between the Site Office and: 1) Lab Management; 2) Corporate Parent? Are they effective?
		O.1.3 Are assurance processes "transparent" in that the Site Office has ready access to assurance information?
P. DOE partners with the contractor and lab management to implement and use the	P.1 How does the Site Office partner with the contractor and corporate parent?	P.1.1 How are the planned Site Office assessments leveraging CAS assessments and performance data?

CAS Attribute and/or Expected Outcome	General Question	Detailed Questions
CAS outcomes to improve mission delivery.		P.1.2 How are Site Office oversight activities structured as a result of the CAS?
		P.1.3 Are there any areas of duplication in the system that could be eliminated?
		P.1.4 Has the Site Office revised its level and/or mix of oversight as a result of the CAS being in place? If so, how?
		P.1.5 Is there a climate of mutual trust between the DOE Site Office, the corporate parent, and laboratory management? Please provide perspectives and examples.
Q. Validation and verification of overall effectiveness of the CAS and providing feedback for improvement.	Q.1 How are verification and validation activities determined?	Q.1.1 What are typical verification and validation activities?
		Q.1.2 What determines areas of focus in verification or validation activities?
		Q.1.3 How does the Site Office Manager provide feedback to DOE-SC leadership on the CAS?
R. Valued delivered by the overall Assurance System and improvement of the DOE independent assessment function.	R.1 What benefits to the Site Office's independent assessment of contractor performance have been derived from the CAS?	R.1.1 Is the Assurance system in place adequate?
		R.1.2 Has the contractor's corporate parent Governance function added value to the DOE assessment of contractor performance?
		R.1.3 Has the overall Assurance System added value to the DOE assessment of contractor performance?
	R.2 How could the Site Office's independent assessment of contractor performance be improved?	R2.1 Are there any lessons learned or other feedback suggesting that any change might be needed to increase effectiveness?

CAS Attribute and/or Expected Outcome	General Question	Detailed Questions
		R.2.2 Are there other improvements that could be made to any component of the DOE performance assessment function?
	R.3 What areas of the CAS and its performance need to improve or mature before a change in the oversight model can be considered?	
	R.4 Are there any lessons learned that you'd like to share with your fellow Site Offices?	

Revision Log

Peer Review Guide and LOIs

Revision Number	Revision Date	Revision Details
0	April 2, 2010	Initial Version w/o Steering Committee Review
1	April 15, 2010	Incorporate Comments from Steering Committee – 4/15/2010